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EXAMINER

SPOONER, LAMONT M

ART UNIT	PAPER NUMBER
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2654

DATE MAILED: 08/03/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/647,875

Applicant(s)

LIU, SHA

Examiner

Lamont M Spooner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☒ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/13/01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 3, 9, and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 3 recites the limitations:

"unifying the syntax concepts" in claim 3 line 4, page 27.

Claim 12 recites the limitations:

"the all-information semanteme marking system" in claim 12 line 1, page 30.

"the commonly restricted vocabulary" in claim 12 lines 1 and 2, page 30.

"the definition of concepts" in claim 12 line 2, page 30.

"the necessary semantic information library" in claim 12 line 3, page 30.

"the commonly restricted syntax information items" in claim 12 line 4, page 30.

"the necessary semantic information library" in claim 12 line 5, page 30.

There is insufficient antecedent basis for these limitations in the claims.

Claim Objections

4. Claim 3 objected to because of the following informalities:

In claim 3, line 16 "proving" should be --providing--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 2, 4, 6, 7, 10, 11, 13, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Carbonell et al. (US Patent No. 6,139,201 filed Apr. 15, 1996).

As per **claim 1**, Carbonell et al. discloses a language translation method involving open all information template man-machine dialogue which includes the following steps:

a. commonly restricting various natural languages (C.4.lines 33-38, Constrained Source language (CSL), C.14.lines 5-12-describes the various natural languages, Fig 3 items 305, 260, 123a, 123b, 123c-all various languages are commonly bound and restricted by CSL and interlingua.

b. establishing a man-machine dialogue template for a sentence (C.4.lines 60-64-Text Editor (TE) with Language Editor (LE) with machine translation (MT) with Domain Model (DM)-all comprising the man-machine dialogue template for a sentence within the TE, C.5.lines 12-19-the dialogue between author/user and machine, C.5.lines 50-56 and C.7.line 53-C.8.line 22-the identified structure of text in the tables is

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interpreted as the template within the TE) which includes all the necessary semantic information elements of various natural languages (C.16.lines 23-26).

c. providing by the man-machine dialogue template all the commonly restricted candidate semantic information items corresponding to the original language symbols (C.16.lines 23-31), and blank information items for expanding by the user (C.9.lines 66, 67, C.10.line 1-there is no form to provide, item is blank until author expands/or enters selection).

d. automatically optimizing among all the commonly restricted candidate semantic information items by the computer of the translation system (C.5. lines 12-19, and then manually readjusting and confirming the optimized results on the man-machine dialogue template by the user of the original text (C.6.lines 12-16-author modifies optimized feedback); and

e. creating the translation based on the semantic information items determined through man-machine complementation (C.6.lines 13-16) and converting the semantic information items (C.16.lines 23-26) determined through man-machine complementation (C.6.lines 13-16) into translation symbols which are provided together with the translation to the user of the translation (C.6.lines 38-47).

As per **claim 2**, Carbonell et al. discloses all of the limitations of claim 1, upon which claim 2 depends. Carbonell et al. further discloses:

necessary semantic information elements in step b include items of definition of concepts, items of tense information, items of voice information and items of part of speech (C.17.lines 3-8).

As per **claim 4**, Carbonell discloses all of the limitations of claim 1, upon which claim 4 depends. Carbonell further discloses:

in step c, of claim 1, in case there is blank in the candidate information item corresponding to the original language symbol, the user may use the natural language symbols which have already been included in the system to describe it (C.10.lines 9, 10-the synonyms already in system are provided for description of blank or unfilled field for the author/user).

As per **claim 6**, Carbonell et al. discloses all of the limitations of claim 1, upon which claim 6 depends. Carbonell further discloses:

manually readjusting and confirming the automatically optimized results in step d is to manually select one or more items from the indefinite information items on the all-information dialogue template by the user (C.6.lines 35-37).

As per **claim 7**, Carbonell et al. discloses all of the limitations of claim 1, upon which claim 7 depends. Carbonell et al. further discloses:

said man-machine dialogue template for sentence in step b is a dialogue frame including three dimension spatially positioned syntax element items(C.23.lines 31-45).

As per **claim 10**, Carbonell et al. discloses all of the limitations of claim 1, upon which claim 10 depends. Carbonell et al. further discloses:

in step d, the user may manually readjust and confirm the optimized results on the all-information dialogue template by one item or a variety of items (C.6.lines 35-40-author selects on TE template variety of semantic items for appropriate meanings, through interaction with LE).

As per **claim 11**, Carbonell et al. discloses an all-information semanteme marking system which includes:

necessary semantic information library for storing therein basic vocabulary and definition of concepts thereof and syntax information items;

text input means for inputting a text whose semantemes are to be marked (C.4.lines 33, 34, 40, 41, C.8.lines 11-14-marking disambiguated text which with only one meaning interpreted as semantemes);

text storage means for storing the text inputted through the text input means (C.4.lines 64, 65-stored in the file management system (FMS));

text display means for displaying a text stored in the in the text storage means (C.4.lines 60-64, C.6.lines 4, 5-TE in conjunction with LE displays information from FMS);

sentence selecting means for selecting a sentence in the text displayed by the text display means (C.6.lines 5-8);

automatic sentence structure analyzing means for automatically analyzing the structure of the selected sentence based on statistical experience (C.6.lines 12-15);

semanteme marking template display means (C.5.lines 41-44, 50-56 - the disambiguated word is interpreted as semanteme, the interactive table corresponds to the template) for displaying a semanteme marking template (C.5.lines 12-15, C.7.lines 36-50, C.8.lines 11-14, C.12.lines 35-37-individual word with only one sense marked), wherein: when a sentence is selected by the sentence selecting means (C.6.lines 4-8-author uses TE to select sentence from the File Management System (FMS)), the

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semanteme marking template is displayed corresponding to the selected sentence (C.5.lines 50-56), said template includes vocabulary information element items (C.13.lines 56-59) and syntax information element items corresponding to the words in the sentence (C.9.lines 31-37), wherein the definition of concepts and all the synonyms of the words included in the necessary semantic information library are displayed in the corresponding vocabulary information element items, all the possible syntax information items of the vocabulary are displayed in the syntax information element items (C.5.lines 12-14) based on the analysis results of the automatic sentence structure analyzing means (C.5.lines 15-17), wherein the syntax information items are also stored in the necessary semantic information library (C.5.lines 15-19);

semanteme marking means adapted for the user to select one or more items from the definition of concepts and the synonyms in the vocabulary information element items and one or more items from the syntax information items in the syntax information element items (C.6.lines 35-37-author selects marked semantemes until full disambiguation is reached).

marked text storage means for storing the text with the marking information (C.6.lines 38-42-marked text is stored within MT unit).

marking instruction means for instructing the system to display marking information of a sentence in the text displayed by the text display means (C.9.lines 31-36, 50-61-instructions to display marking information of a sentence of the text).

marking display means for displaying in the form of said marking template the marking information corresponding to the instructed sentence which is stored in the marked text storage means (C.9.lines 54-55).

As per **claim 13**, Carbonell et al. discloses all of the limitations of claim 11, upon which claim 13 depends. Carbonell et al. further discloses:

the vocabulary information element items of said words also include the vocabulary of a specified language which is stored correspondingly in the necessary semantic information library (C.12.lines 60- 66), and the syntax information element items of said words also include the syntax information items of the specified language which is stored correspondingly in the necessary semantic information library (C.17.lines 3-8, 33-39).

As per **claim 14**, Carbonell et al. discloses all of the limitations of claim 11, upon which claim 14 depends. Carbonell et al. further discloses:

the contents of the vocabulary information element items may also be other information used to describe the meaning of the vocabulary besides said contents for selection (C.9.lines 54-56-the other information includes vocabulary usage example).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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8. Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carbonell et al. (US Patent No. 6,139,201 filed Apr. 15, 1996) in view of Uramoto (US Patent No. 5,844,798 filed Feb. 28, 1994).

As per **claim 3**, Carbonell et al. discloses all of the limitations of claim 1, upon which claim 3 depends. Carbonell et al. further discloses:

a1. unifying the syntax concepts having the same function but different objects (C.27.lines 6-15, C.28.lines 16-21).

a2. deleting as many as possible the syntax concepts which are not indispensable (C.26.lines 49-55);

a3. establishing a basic concepts set commonly used by various languages (C.16.lines 24-30)

a4. taking the near synonyms of the basic concepts in various natural languages as the attached near words (C.10.lines 5-10-saw and seen are interpreted as the near synonyms of view), and in case no corresponding near synonym can be found in one language (C.10.lines 12-14), using the basic concepts in the language as substitute (C.10.lines 14, 15-the replacement options including the basic concepts);

Carbonell et al. does not explicitly disclose:

a5. for those natural language words or concepts which can not be expressed by the basic concepts, providing blank information items by the dialogue template.

However, Uramoto teaches establishing a basic concepts set commonly used by various languages (C.11.Table 1, C.16.Table 4, C.17.Table 4, C.18.Table 5) through statistically analyzing the use frequency of the words and merging the synonyms in the

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main languages (C.11.lines 55-60, C.11.Table 1, C.16.Table 4, C.17.Table 4, C.18.Table 5-each table identifies the merging of synonyms in the corresponding main languages). Therefore, at the time of the invention, it would have been obvious to one ordinarily skilled in the art to combine Carbonell et al. with Uramoto. The motivation for doing so would have been to determine polysemous equivalents of various languages through frequency analysis (Uramoto C.12.lines 34-42).

As per **claim 9**, Carbonell et al. and Uramoto disclose all of the limitations of claim 3, upon which claim 9 depends. Carbonell et al. further discloses:

the common restriction of various natural languages further includes:

a6. vague common restriction centering about connotation (C.6.lines 27-30).

a7. concept unified common restriction regardless of the differences of the grammar attributes (C.28.lines 1-12-semantic unification is performed regardless of the grammar attributes).

9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carbonell et al. (US Patent No. 6,139,201 filed Apr. 15, 1996) in view Chong et al. (US Patent No. 5,497,319 Mar. 5, 1996).

As per **claim 5**, Carbonell et al. discloses all of the limitations of claim 4, upon which claim 5 depends. Carbonell et al. does not disclose:

counting the use frequency of the information items expanded by the user, determining new commonly used basic concepts based on the counting results of the use frequency, and simultaneously adding natural language symbol items and

corresponding information items in the man-machine dialogue template of all the languages.

However, Chong et al. teaches counting the use frequency of items expanded by the user (C.18.lines 20-23), determining new commonly used basic concepts based on the counting results of the use frequency (C.18.lines 22-24-synonymous entry interpreted as the basic concept, identified based on use frequency), and simultaneously adding natural language symbol items and corresponding information items (C.18.lines 24-27). Therefore, at the time of the invention, it would have been obvious to one ordinarily skilled in the art to combine Carbonell et al. with Chong et al. The motivation for doing so would have been to promote user entries and semantic equivalent identified by the dictionary management operator to be available for use and display (Chong et al. C.18.lines 26-29, 38-44).

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carbonell et al. (US Patent No. 6,139,201 filed Apr. 15, 1996) in view Takanashi et al. (US Patent No. 5,442,780 Aug. 15, 1995).

As per **claim 8**, Carbonell et al. discloses all of the limitations of claim 1, upon which claim 8 depends. Carbonell et al. does not disclose:

said man-machine dialogue template for sentence in step b is a virtual template.

However, Takanashi et al. teaches having a virtual template/table including information for selection (C.6.lines 21-29, 38-42). Therefore, at the time of the invention, it would have been obvious to one ordinarily skilled in the art to combine Carbonell et al. with Takanashi et al. The motivation for doing so would have been to select the virtual

table if the information within is considered containing a desired attribute (Takanashi et al. C.6.lines 42-46).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Kugimiya et al (US Patent No. 4,860,206 Aug. 22, 1989) teaches using user entered symbol for finding an equivalent word in various languages, for words not contained in an ordinary dictionary, by an auxiliary function.
- Ausborn (US Patent No. 5,056,021 Oct. 8, 1991) teaches linking various concepts to words.
- Kozma (US Patent No. 5,983,169 filed Nov.13, 1995) teaches disambiguating phrases in natural languages through structural and template analysis.
- Suematsu (US Patent No. 5,418,716 May 23, 1995) teaches determining linguistic characteristics using spatially represented templates for reflecting syntactic and semantic characteristics which reside in the slots.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lamont M Spooner whose telephone number is 703/305-8661. The examiner can normally be reached on 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nguyen Vo can be reached on 703/308-6728. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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07-22-04

Nguyen Vo
7-23-2004

NGUYEN T. VO
PRIMARY EXAMINER